REMARKS

Claims 1, 3, 6, 7, 9 and 10 are amended, claims 2, 4, 5, 8 and 11 are canceled, and new claims 12-18 are added herein. Support for the amendments to the claims can be found, for example, in the original claims and in the specification on page 8, lines 5-19; page 9, lines 21-23; page 10, lines 5-10; and page 11, line 29 to page 12, line 1. Hence no issues of new matter are presented. Upon entry of the Amendment, claims 1, 3, 6, 7, 9-10 and 12-18 will be all of the claims pending in the application.

I. Objection to Specification

The specification is objected to allegedly because the title is not descriptive and a new title is required.

The title has been changed to "A Plasma Display Panel with Phosphor Mono-Crystal Particles", thereby obviating the objection.

Accordingly, Applicants respectfully request withdrawal of the objection.

II. Rejection Under 35 U.S.C. § 112, 2nd Paragraph

Claim 11 is rejected under 35 U.S.C. § 12, 2nd paragraph, as allegedly being indefinite. The Examiner states that the recitation, "the fluorescent layer has a film thickness of 0.05 to 0.5 nanometers" renders the claim indefinite because it is unclear as to how the film having a thickness of 0.05-0.5 nanometers would comprise a fluorescent material made of particles having a particle diameter of 10-200 nanometers as recited in the preceding independent claim 10. The

Examiner states that for purposes of examination the recitation is interpreted as a film of thickness of 0.05-0.5 nanometers.

Claim 11 is canceled herein and therefore the rejection as to claim 11 is moot. Claim 10 as amended, which incorporates the subject matter of claim 11 recites, "wherein said fluorescent layer is a film having a thickness of 0.05-0.5 micrometers". In the original specification, it is disclosed that the fluorescent layer is made up of mono-crystal phosphor particles having an average diameter of 10-200 nm. Page 9, lines 14-17. Further, it is disclosed that the fluorescent layer has a film thickness of 0.5-1.0 μm and preferably 0.1-0.5 μm (page 9, lines 21-23). Thus, it is readily apparent to one of ordinary skill in the art that the fluorescent layer has a thickness of 0.05-0.5 μm. Therefore, when properly read in light of the specification, one of ordinary skill in the art is readily apprised of the meaning and scope of the claims.

Accordingly, Applicants respectfully request withdrawal of the rejection.

III. Claim Rejections Under 35 U.S.C. § 102

Claim 1 is rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Hampden-Smith et al (US '123). According to the Examiner, US '123 discloses a plasma display panel having a fluorescent layer comprised of single layer crystal particles having a diameter of 25-100 nanometers.

Claim 1 is amended to incorporate the subject matter of claim 8 (and intervening claims 2 and 4) indicated as allowable by the Examiner in the Office Action dated July 14, 2003. Namely, US '123 does not teach or suggest the aspect of the claimed invention of a display panel

wherein a fluorescent layer of the display panel comprises a fluorescent material which comprises phosphor mono-crystal particles having a particle diameter of 10-200 nanometers; a reflection layer for reflecting light emitted from the fluorescent material, which is provided below the fluorescent layer; and a color filter layer for selectively transmitting only a pre-determined-wavelength visible light provided between the fluorescent layer and the reflection layer and wherein an inorganic pigment is used to form the color filter layer having an average particle diameter of 10-200 nanometers. In view thereof, claim 1 is distinguished from US '123 since US '123 does not teach or suggest all of the elements of claim 1 as amended.

Accordingly, Applicants respectfully request withdrawal of the rejection.

IV. Claims Under 35 U.S.C. § 103

Claims 1-3 and 6-7 are rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Okamura et al (US '633) in view of US '123. According to the Examiner, US '633 discloses a plasma display panel wherein a phosphor constituting a fluorescent layer of the plasma display panel is made of particles each having a diameter of 10-200 nanometers. The Examiner also asserts that US '633 discloses a reflection layer provided below the fluorescent layer, made of white pigment powder and having a thickness of 1-20 micrometers and a fluorescent layer having as film thickness of 0.05-0.5 nanometers. The Examiner states that US '633 is silent with respect to the particles being mono-crystal particles.

The Examiner relies on US '123 for the teaching of a plasma display panel having a fluorescent layer comprised of single crystal particles having a diameter of 25-100 nanometers,

which increase the luminescent efficiency and brightness of the display panel. It is the Examiner's position that it would have been obvious to one of ordinary skill in the art to incorporate the single crystal particles disclosed by US '123 in the plasma display panel of US '633 in order to further increase the luminescent efficiency and brightness of the display panel.

Claim 1 is amended to incorporate the subject matter of claim 8 (and intervening claims 2 and 4), which is indicated as allowable by the Examiner in the Office Action dated July 14, 2003, and therefore claim 1 is distinguished over the cited references since the references, taken alone or in combination do not teach all of the elements of the claimed invention as stated above. Claim 2 is canceled herein and therefore the rejection as to claim 2 is rendered moot. Claims 3 and 7 are amended to depend from claim 1 and claim 6 depends from claim 1. Therefore claims 3, 6 and 7 are distinguished over the cited references for at least the same reason as claim 1.

Accordingly, Applicants respectfully request withdrawal of the rejection.

Claims 4 and 5 are rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over US '633 in view of US '123 and further in view of Osawa et al (US Publication No. 2000294148). The Examiner states that the combination of US '633 and US '123 fails to teach the element of a color filter layer provided between the fluorescent layer and the reflection layer. The Examiner relies on Osawa et al for the teaching of a plasma display panel further comprising the use of a filter layer made of an inorganic pigment located adjacent to a phosphor layer in order to enhance contrast and brightness of the display and easily increase the accurate position of the color filter. It is the Examiner's position that it would have been obvious to one of ordinary skill

in the art to incorporate the color filter disclosed by Osawa et al in the plasma display panel of US '633 as modified by US '123 for the same reasons.

Claims 4 and 5 are canceled herein, thereby rendering the rejection moot.

Accordingly, Applicants respectfully request withdrawal of the rejection.

Claim 10 is rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kado et al (JP 112138962) in view of US '123 and further in view of Okamura et al. The Examiner asserts that Kado discloses a plasma display panel in which a rear-side glass substrate provided with a data electrode covered by a white dielectric and a front-side glass substrate provided with a transparent electrode covered by a protection layer and a transparent dielectric are both sealed by a sealing material, in which a discharge cell separated by a partition is formed, wherein a fluorescent layer is formed is such a manner as to cover the protection layer of the front-side glass substrate .

The Examiner states that Kado fails to disclose a fluorescent layer being made of mono-crystal particles having a particle diameter of 10-200 nanometers. The Examiner relies on US '123 for the teaching of a plasma display panel having a fluorescent layer comprised of single crystal particles having a diameter of 25-100 nanometers, which increase the luminescent efficiency and brightness of the display. It is the Examiner's position that it would have been obvious for one of ordinary skill in the art to incorporate the single crystal particles of US '123 in the plasma display panel of Kado for the same reason.

The Examiner states that Kado also fails to disclose a trace electrode provided along with the transparent electrode in the front-side substrate. The Examiner relies on US '633 for the dicslosure of a plasma display panel comprising a front-substrate provided with a transparent electrode and trace electrodes, which are used to lower the resistance of the transparent electrodes and thereby prevent any unwanted drop voltage within the transparent electrode. It is the Examiner's position that it would have been obvious to a person of ordinary skill in the art to incorporate trace electrodes in the plasma display disclosed by Kado for the same reason.

Claim 10 is amended to incorporate the subject matter of claim 11 indicated as allowable by the Examiner in the Office Action dated July 14, 2003. Thus, the cited references do not teach or suggest all of the elements of the presently claimed invention as recited in claim 10 as amended. Namely, the references do not teach or suggest, taken alone or in combination, the aspect of the claimed invention of a display panel having a fluorescent layer made of a fluorescent material of mono-crystal particles having a particle diameter of 10-200 nanometers, wherein the fluorescent layer is a film having a thickness of 0.05-0.5 micrometers. Thus, the presently claimed invention is not rendered obvious.

Accordingly, Applicants respectfully request withdrawal of the rejection.

V. Allowable Subject Matter

Claims 8, 9 and 11 are indicated as containing allowable subject matter, but are objected to as being dependent upon a rejected based claim.

Claims 8 and 11 are canceled and the subject matter is incorporated into claims 1 and 11, respectively. Claim 9 is amended to depend from claim 1, in view of the cancellation of claim 4, and to recite a film thickness of the color filter layer of 0.1-5 μm. Claims 2 and 4 are also canceled and claims 3 and 7 are amended to depend from claim 1. New claim 12 incorporates the subject matter of claim 9 (independent claim 1 and intervening claims 2 and 4) which is indicated as allowable. New claims 13-18 depend from claim 12 and are distinguished over the cited art for at least the same reason. Thus, the application is in condition for allowance.

Accordingly, Applicants respectfully request withdrawal of the objection.

V. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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